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Managing Risks of Capital Mobility

Mansoor Dailami

Countries need suitable mechanisms for balancing the risks and benefits of financial openness, including mechanisms through which to provide insurance to citizens — through the marketplace or through redistributive policy — and thus to avert political pressure for capital controls. Capital mobility as a policy objective gained currency and support only after significant trade liberalization and only in democratic countries that had established the ability to respond to citizens' demands for national economic security.

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Summary findings

Inherent in pursuing openness to international capital flows is an awareness that it brings both benefits and risks. Much of the current debate is about how best to balance them.

Major benefits for developing countries include access to a broader menu of investment sources, options, and instruments, as well as enhanced efficiency of domestic financial institutions and the discipline of capital markets in conducting domestic macroeconomic policy. By easing financing constraints, the greater availability of international finance can extend the period for implementing needed adjustments.

From the perspective of emerging market economies, Dailami highlights two sources of risk:

- The host governments' policy of liberalizing capital controls before having established the macroeconomic, regulatory, and institutional foundations required for capital account openness.
- A shift in foreign lenders' and investors' sentiments and confidence, not necessarily related to a particular country's long-term creditworthiness.

Risk management demands judicious strategies for both corporate and financial institutions and national policy. At the institutional level, with the advances in technology and communications, financial risk management practice has improved significantly in recent years through the use of statistical models, such as value at risk, computer simulation, and stress testing.

At the national level, with the worldwide trend toward democracy, Dailami argues that managing the risks of financial openness will require developing national mechanisms through which to provide insurance to citizens — through the marketplace or through redistributive policy — and thus to avert political pressure for capital controls.

To succeed, open democratic societies have to balance the threat of capital exit, made easier by the opening of capital markets, with the political voice of citizens—demanding protection through redistribution, social safety nets, and other insurance-like measures. These insurance mechanisms have been critical in easing the tension between politics and financial openness in OECD countries. Indeed, cross-country empirical analysis confirms that countries that spend a large share of their GDP on social needs (education, health, and transfer payments) are more open to free international capital flows and also score high on measures of political and civil liberty.

This paper — a product of Governance, Regulation, and Finance, World Bank Institute — is part of a larger study, "The Challenge of Development in the 21st Century" (RPO 683-14). Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact William Nedrow, room G2-072, telephone 202-473-1585, fax 202-334-8350, Internet address wnedrow@worldbank.org. Policy Research Working Papers are also posted on the Web at http://www.worldbank.org/html/dec/Publications/Workpapers/home.html. The author may be contacted at mdailami@worldbank.org. October 1999. (30 pages)

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Managing Risks of Capital Mobility

"Times of trouble prompt us to recall the ideals by which we live."
– Michael J. Sandal, *Democracy's Discontent*

Abstract Inherent in pursuing financial openness is the realization that there are benefits and risks, and much current debate probes how best to balance them. Seen from the perspective of emerging market economies, this paper highlights two sources of financial risk: the policy of national host governments to liberalize their capital controls without having achieved the macroeconomic, regulatory, and institutional prerequisites for capital account openness; and a shift in sentiment and confidence of foreign lenders and investors not necessarily related to a particular country's long-term creditworthiness. With the increasing trend towards democracy worldwide, the paper argues, managing such risks will involve evolving mechanisms at the national level through which insurance is provided to citizens, either through the marketplace or redistributive policy to avert political pressure for capital controls. Cross-country empirical analysis confirms that countries that spend a high proportion of their GDP on social needs (education, health and transfer payments) are open to free international capital flows, and also score high on measures of political and civil liberty.

I. Introduction

International financial policy is currently in a state of introspection and revisionism. It is in search of a new paradigm to enlighten, explain, and draw lessons from the novel developments of the 1990s: perforce, the globalization of finance, increased volume and mobility of capital flows across national boundaries, financial innovation and advances in information technology, and exposure to global financial risk. Given the policy consensus and conventional wisdom of the 1980s, emphasizing sequencing of financial liberalization and macroeconomic stabilization, the financial events of the 1990s came as a total surprise.

Many developing countries embraced globalization in the 1980s through trade in goods and services and began to liberalize their domestic financial markets. They achieved considerable macroeconomic stabilization and enjoyed steady high economic growth. But they also became vulnerable in the 1990s to cycles of investor euphoria and panic. After a sharp increase in capital flows beginning in the early 1990s, a combination of tight liquidity in international capital markets along with austere domestic macroeconomic policy responses led to deep economic and financial crises.[1]

[1] The crises affecting emerging market economies in 1997-1998 were unprecedented in several important respects, including the extent of initial depreciation of local currencies, the plunges in asset values on local equity and bond markets, the severe financial distress in finance and industry, and the contraction of economic activity (see Table A5.5 in the Annex). Also, a large body of literature has developed over the past two years discussing the causes and consequences of recent financial crises in emerging market economies. For a sample of such studies, see Sachs, Tornell, and Velasco (1996), Calvo and Mendoza (1996), and Radelet and Sachs (1998).

These crises have already imposed extremely high social and economic costs on the affected countries. Just for East Asia, the loss in aggregate domestic output, measured by deviation from historical trends, is estimated to be $500 billion (in 1996 prices and exchange rates) in 1997-1999.[2] This is nearly 1.3 times those countries' external debt in 1996. With the memory of the debt crisis of the 1980s and its prolonged resolution still alive, the international policy response was prompt, involving the extension of large stand-by and direct loans in order to refinance maturing foreign exchange obligations and restore confidence. The total volume of international financial assistance committed from August 1997 to December 1998 to Thailand, Korea, Indonesia, Russia, and Brazil amounted to $190 billion—1.4 times the total stock of foreign exchange reserves for these countries--and 30 percent of the foreign exchange reserves of all developing countries at the end of 1997.[3]

The crises have also catalyzed interest in the broader debate on the functioning, architecture, and regulation of international financial markets. Fifty-five years after the post-war institutional reconstruction that launched the Bretton Woods consensus, the international community must again contemplate how to design a new international financial architecture that would promote financial stability and long-term economic growth.

The underlying conditions, trends, and forces at play have changed substantially since 1944. Global financial markets have grown significantly in the size, complexity, and range of services and products that they offer. Private capital has emerged as the dominant source of development finance, surpassing official finance by a factor of 5 to 1 in recent years. In addition, the Euro has been launched, which could potentially rival the US dollar in both the international payment system and international finance.

Even more important, the spread of democracy and increased political and civil liberty mean that for the first time in human history, electoral democracy is the world's predominant form of government. According to a recent survey by the Freedom House, 88 of the world's 191 countries (46 percent) – the largest number ever recorded – were rated as free, meaning that "they maintain a high degree of political and economic freedom and respect for civil liberties."[4]

Inherent in pursuing financial openness is the realization that there are benefits and risks, and much current debate probes how best to balance them.[5] The benefits to developing countries include access to a broader menu of investment sources, options, and instruments, enhanced efficiency of domestic financial institutions, and the disciplinary impact of capital markets in conducting domestic macroeconomic policy. At

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[2] See Note 1 in Annex for an explanation of the methodology used in this calculation.

[3] See Dailami (1998) and Eichengreen (1999) for further elaboration.

[4] A majority of the world's population is run by democratically elected governments - thus, today, 2.354 billion people (40 percent of the world's population) now live in free societies, 1.57 billion (26.5 percent) live in countries that are partially free and 1.984 billion (33.5 percent) live in non-free countries. See Karatnycky (1999).

[5] In a survey paper, Williamson and Mahar (1998) reviewed empirical studies and experience of financial liberalization and its linkage with financial crises. Their conclusion is that financial liberalization offers economic gains but it carries many risks. In twenty-four countries that had experienced financial crises, thirteen of them had liberalized their capital account within five years prior to crises.

the same time, capital account openness, if not appropriately sequenced and grounded in broader financial sector reform and institutional development, could expose the domestic economy to a series of risks, such as reversals in capital flows and illiquidity in international capital markets.

- *Identify the risks.* The main risks to financial stability in developing countries come from two sources. The first is in the policy of national host governments to liberalize their capital controls through removal or relaxation of exchange restrictions and barriers to capital transactions (both inward and outward) without having achieved the macroeconomic, regulatory, and institutional (political) prerequisites for capital account openness. In regard to the supply of foreign capital to developing countries, a shift in sentiment and confidence of foreign lenders and investors (both transnational and institutional) not necessarily related to a particular country's long-term creditworthiness constitutes the second source of risk[6]. This shift in investors' sentiment has its most immediate and dramatic impact when the supply of capital takes the form of short-term bank lending and portfolio investments in local stocks and bonds. So, this second type of risk has come to be associated with volatility in short-term capital flows, as distinct from long-term direct investments in plant and equipment.

- *Elucidate strategic objectives.* Having identified these risks to developing countries' integration into global financial markets, the second step in evolving an effective risk management strategy is to elucidate the overall objectives that the strategy is supposed to serve. These objectives can be defined broadly–openness to international capital movements, democratic forms of governance, and policy autonomy. They command a wide degree of respect among scholars and policymakers dealing with international finance. And their appearance at the center of the policy debate clearly reflects the remarkable success in the global advance of democracy, political freedom, and finance (international financial transactions now dwarf trade in goods and services by more than 5 to 1 as a percentage of global GDP).

- *Develop mechanisms to mitigate and share risks.* The third step in this risk management strategy involves the development of appropriate institutional and regulatory frameworks to minimize the likelihood of future crises—and mechanisms to contain their associated socio-economic costs. When domestic markets for risk-sharing are absent or imperfect, redistributive policy can act as a partial substitute in mitigating risks induced by volatility of capital flows. The need for redistribution arises because capital account liberalization is likely to increase economic insecurity and inequality as the threat of exit of capital increases—and with that the political voice or demand for protection.

So, to avert the pressure for capital controls, there must be mechanisms through which insurance is provided to citizens, either through marketplace or public provision, to

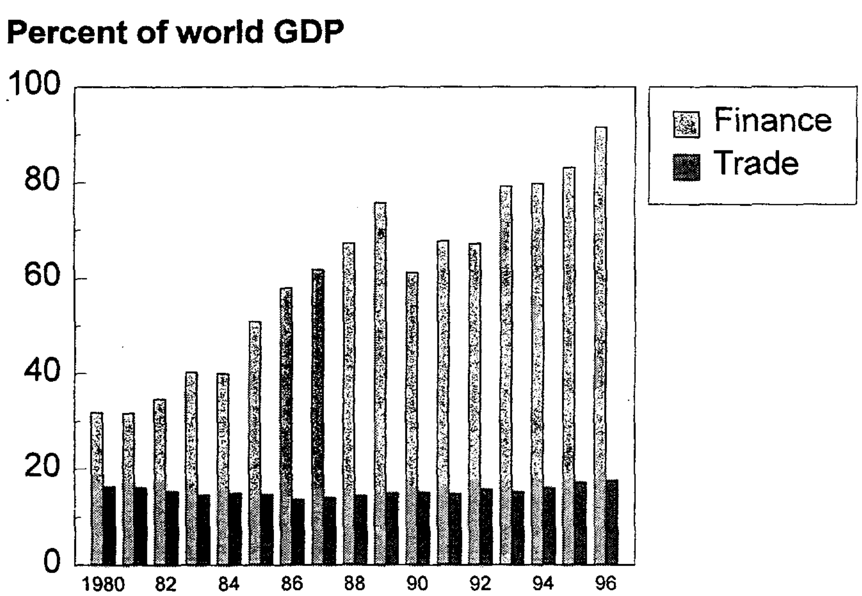
[6] There are both quantity and price implications to a shift in foreign investors' sentiment that need to be taken into account. On the quantity side, a change in the creditors and investors' willingness to supply capital to a borrower can take place, either through the refinancing of existing claims or through default and bankruptcy. The adjustment to higher costs of capital would necessarily work through other channels, with important domestic implications in terms of higher interest rates and slower investment and growth.

protect them against the hazard of exposure to international financial volatility. On the international front, since capital account liberalization implies welfare gains globally, there exists a justification and rationale for international action—of policy coordination, prudential financial regulation and supervision, and lender-of-last-resort activity to provide liquidity and emergency financial assistance.

II. Rapid Expansion in International Capital Markets

By any measure, the growth in international financial markets in the 1990s has been stupendous. The volume of international lending in new medium- and long-term bonds and bank loans reached an estimated value of $1.2 trillion in 1997, compared with $0.5 trillion in 1988 (BIS, 1998). World trade in goods and services, though having grown significantly since the early 1970s, is now dwarfed by international financial transactions, at more than five times the value of world trade (Figure 5.1). Some other statistics: Cross-border transactions in bonds and equities in OECD countries, less than 10 percent of GDP in 1980, reached more than 100 percent of GDP in 1995. Average daily turnover in foreign exchange markets reached $1.6 trillion (up from $0.20 trillion in 1986), compared to the $4.7 trillion a year in trade in goods and services. The ratio of total global market capitalization of stock markets relative to world GDP rose from 23:1 in 1986 to 68:1 in 1996, while derivative markets expanded from $7.9 trillion in 1991 to $40.9 trillion in 1997 (Table 5.1).

Figure 5.1:
Financial markets take off: Global financial market size and world trade



Financial markets include stocks and international bonds and loans outstanding
Trade figures are averages of imports and exports.
Sources: IFC, BIS, and IMF.

Table 5.1:
Growth of derivatives markets, 1991-97
(notional values in billions of U.S. dollars)

	Instruments traded on exchanges					Over-the counter (OTC) instruments			
	Interest rate futures	Interest rate options	Currency futures & options	Stock market index futures & options	Total Exch.	Interest rate options	Interest rate swaps	Currency swaps	Total OTC
91	2,157	1,073	81	109	3,519	577	3,065	807	4,449
92	2,913	1,385	98	238	4,635	635	3,851	860	5,346
93	4,959	2,362	110	340	7,771	1,398	6,177	900	8,475
94	5,778	2,624	96	366	8,863	1,573	8,816	915	11,303
95	5,863	2,742	82	502	9,189	3,705	12,811	1,197	17,713
96	5,931	3,278	97	574	9,880	4,723	19,171	1,560	25,453
97	7,489	3,640	85	993	12,207	5,033	22,116	1,585	28,733

Source: Bank for Interntaional Settlements: Annual Report (various issues).

Developing countries were not forgotten. The net flow of foreign capital to developing countries rose from $98 billion in 1990 to $335 billion in 1997, a major part of it originating from foreign direct investment, portfolio investments in domestic stocks and bonds, commercial bank lending, and the issues of equity and bonds in offshore markets (Table 5.2). Flows of foreign direct investment to developing countries increased more than six times from 1990 to 1998, and their share of global FDI flows has risen from 25 percent in 1991 to an estimated 42 percent in 1998, compared with 18 percent in the mid-1980s (World Bank, GDF, 1998).

Table 5.2:
Net long-term resource flows to developing countries (US$ billion)

Type of flows:	1990	1991	1992	1993	1994	1995	1996	1997	1998a
Net long-term resource flows	100.8	123.1	152.3	220.2	223.6	254.9	308.1	338.1	275.0
Official flows	56.9	62.6	54.0	53.3	45.5	53.4	32.2	39.1	47.9
Private flows	43.9	60.5	98.3	167.0	178.1	201.5	275.9	299.0	227.1
From international capital Markets	19.4	26.2	52.2	100.0	89.6	96.1	149.5	135.5	72.1
Private debt flows	15.7	18.6	38.1	49.0	54.4	60.0	100.3	105.3	58.0
Commercial bank loans	3.2	4.8	16.3	3.3	13.9	32.4	43.7	60.1	25.1
Bonds	1.2	10.8	11.1	37.0	36.7	26.6	53.5	42.6	30.2
Others	11.4	3.0	10.7	8.6	3.7	1.0	3.0	2.6	2.7
Portfolio equity flows	3.7	7.6	14.1	51.0	35.2	36.1	49.2	30.2	14.1
Foreign direct investment	24.5	34.4	46.1	67.0	88.5	105.4	126.4	163.4	155.0

a. Preliminary
Source: World Bank, Debtor Reporting System

Why the expansion?

The acceleration in the globalization of capital markets and the resulting increase in the volume of cross-country capital flows and financial transactions in the 1990s have profoundly altered the structure of international financial markets. This globalization of finance is partly the result of advances in communication and information technologies, which reduced cross-border transaction costs and information asymmetry.[7] It has also come from financial innovations. The creation of the Euro-currency money market centers linking national money and capital markets of major industrial countries; the spread of modern risk management techniques; and the rapid extension of hedge funds have facilitated cross-border capital flows. And the liberalization of insurance and pension sectors in developed countries increased liquidity and the supply of capital to developing countries. Domestic reforms in the developing world also contributed, with the privatization of public enterprises, macroeconomic stabilization, and the relaxation of barriers to cross-border trade in financial instruments for both sovereign and private entities. All this in turn improved country creditworthiness and expanded investment opportunities.

Barriers to the free flow of capital across national boundaries, such as capital controls and foreign exchange restrictions have also been significantly dismantled.[8] In the OECD countries progress towards liberalization of capital controls accelerated, particularly in the 1980s, as members' liberalization obligation under The Code of Liberalization of Capital Movements, were broadened to include virtually all capital movements including short-term transactions by enterprises and individuals.[9] Thus, the U.K. abolished all exchange controls and achieved capital account convertibility in 1979, Japan in 1980, while the timeline for the rest of the OECD stretched until 1992, when the last group–comprising Ireland, Greece, Portugal, and Spain–completed the abolition of their capital controls. Thus, by the early 1990s, the capital accounts of OECD countries were open to a wide range of cross-border financial transactions including capital market securities, money market operations, forward operations, swaps, and other derivatives. This process of liberalization coupled with internationalization of financial markets means that today in OECD countries borrowers can raise financing in their desired currency at competitive terms, and investors have the opportunity to achieve their desired degree of portfolio diversification in terms of currencies, maturities and risk profile.

Regarding emerging market economies, the overall trends have also been towards reform of local financial markets and liberalization of cross-border capital movements, but the progress, the pace, and the scale of liberation measures have not been even.

The underlying liberalization trends have been most clear with regard to the rapid increase in the number of countries that have assumed the IMF Article VIII, thereby declaring their currencies convertible on current accounts, which often precedes capital account convertibility. In 1970 only 34 countries, or 30 percent of the IMF membership, had declared their currency convertible on current account transactions. By 1997, 143

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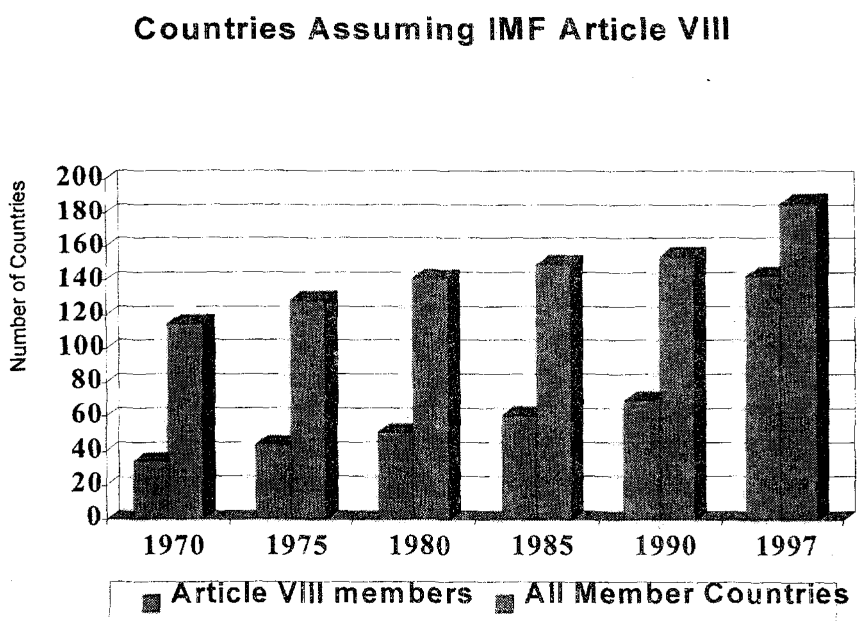
[7] From an historical perspective, the globalization of finance in the 1990s is equivalent to the level reached during the gold standard period from 1870-1914. However, this applied only to a few industrial countries. See Verdier (1998).
[8] The U.S. removed in 1974 the temporary capital restrictions that were imposed in the mid 1960s (see Helleiner, 1994).
[9] See OECD (1990)

countries had done so (see Figure 5.2). In the 1990s alone, 38 countries, including India, Russia, Turkey, Israel, Greece, and the Philippines assumed IMF Article VIII (see Table A5.6 in Annex). With regard to liberalization of capital controls in emerging market economy, two sets of indicators are of interest: First, actual flows of capital that, as shown above, have witnessed a significant expansion in the 1990s, with sharp drops in 1997, 1998, and recovering once again in 1999. Second, national governments' deliberate policies in the 1990s, clearly reflect a considerable degree of opening up, relaxing, and easing of exchange restrictions, controls, and barriers to the entry of foreign financial players to engage in commercial banking, securities, asset management, and other financial services.

More countries open their current account
Figure 5.2:
IMF member countries with convertible currencies on current accounts



III. How Open Are Emerging Market Economies To International Capital Movements?

Evidence about emerging market economies' degree or level of openness--or closeness--to cross-border capital flows is scanty and fragmented. Informational and methodological problems have hindered the proper development of quantitative measures of degree of financial openness. Most prior studies have relied on measures of incidence of capital controls, i.e., whether a particular transaction is subject to restrictions or not, rather than the degrees of intensity of such restrictions and controls.[10] In practice controls can take a variety of forms ranging from direct quantitative limitation on certain transactions or associated transfers, to indirect measures - such as, withholding taxes or reserves on external assets/liabilities, intended to influence the economic incentive to engage in certain transactions. And such controls could apply to transfer of funds associated with financial transactions or the underlying transactions themselves. There exists of course no single measure of a country's level of openness, but a viable measure of a country's level of financial openness to international capital markets needs to incorporate, at least, the distinction between the severity of controls and the different types of transactions contributing to capital flows. Table 5.3 provides preliminary information on such a measure for a sample of 96 countries in 1997.

This measure referred to as Financial Openness Index is constructed using disaggregated measures of capital controls based on the classification and information contained in the IMF Annual Report on Exchange Arrangements and Exchange Restrictions (AEAER), and drawing on the coding methodology developed by Quinn and Toyoda (1997). The measure is a composite index of our coding of rules, regulations, and administrative procedures affecting capital flows (both inflows and outflows) for a total of 27 individual transactions in the current and capital accounts of the balance of payments (see Box 5.1) for each country in the sample. Thus out of 96 countries in the sample, it is interesting to note that 46 can be classified, as of 1997, as open and 10 as semi-open, with both these categories including emerging market economies mostly in the Latin America region and Eastern Europe.

[10] See, for instance, Razin and Rose (1994), Alesina, Grilli and Milesi-Ferretti (1994).

Box 5.1:
Financial Openness Index

This index is based on information contained in the IMF Annual Report on Exchange Arrangements and Exchange Restrictions (1998), and distinguishes between 27 individual transactions, classified into five groups, as shown below.

I. *Imports and Import Payment*
Foreign exchange budget
Financing requirements for imports
Documentation requirements for release of foreign exchange for imports
Import licenses and other non-tariff measures
Import taxes and/or tariffs
State import monopoly

II. *Exports and Export Proceeds*
Repatriation requirements
Financing requirements
Documentation requirements
Export licenses
Export taxes

III. *Payments for Invisible Transactions and Current Transfers*
Controls on these payments

IV. *Proceeds from Invisible Transactions and Current Transfers*
Repatriation requirements
Restrictions on use of funds

V. *Capital Account Transactions*
Capital market securities
Money market instruments
Collective investment securities
Derivatives and other instruments
Commercial credits
Financial credits
Guarantees, sureties, and financial backup facilities
Direct investment
Liquidation of direct investment
Real estate transactions
Personal capital movements
Commercial banks and other credit institutions
Institutional investors

Table 5.3:
Financial Openness Index*: selected developed and developing countries, 1997

Open**		Largely Open**		Partially Closed**		Largely Closed**	
Argentina	1.78	Croatia	1.54	Bahamas, The	1.36	Bangladesh	1.21
Australia	1.77	Ecuador	1.54	Belize	1.44	Barbados	1.28
Austria	1.92	Honduras	1.56	Benin	1.48	Bhutan	1.19
Bahrain	1.73	Israel	1.59	Botswana	1.48	Brazil	1.19
Belgium	1.88	Mongolia	1.56	Bulgaria	1.46	Ethiopia	1.12
Bolivia	1.79	Philippines	1.59	Burkina Faso	1.49	India	1.20
Canada	1.92	Poland	1.54	Burundi	1.39	Malawi	1.26
Denmark	1.92	Slovak Republic	1.58	Cameroon	1.41	Malaysia	1.34
Egypt, Arab Rep.	1.81	Slovenia	1.50	Cape Verde	1.39	Morocco	1.27
El Salvador	1.91	Turkey	1.52	Chile	1.43	Pakistan	1.31
Estonia	1.88			China	1.37	Syrian Arab Rep.	1.20
Finland	1.83			Colombia	1.38		
France	1.73			Congo, Dem. Rep.	1.42		
Germany	1.84			Costa Rica	1.48		
Greece	1.91			Czech Republic	1.48		
Guatemala	1.73			Dominican Republic	1.49		
Guyana	1.72			Ghana	1.43		
Iceland	1.74			Hungary	1.49		
Ireland	1.93			Indonesia	1.46		
Italy	1.84			Korea, Rep.	1.42		
Jamaica	1.76			Lesotho	1.41		
Japan	1.73			Mali	1.49		
Kuwait	1.77			Malta	1.40		
Latvia	1.88			Moldova	1.46		
Lithuania	1.85			Mozambique	1.41		
Luxembourg	1.93			Namibia	1.33		
Mauritius	1.82			Papua New Guinea	1.36		
Mexico	1.69			Romania	1.48		
Netherlands	1.87			Russian Federation	1.43		
New Zealand	1.90			South Africa	1.44		
Nicaragua	1.82			Sri Lanka	1.43		
Norway	1.83			Thailand	1.46		
Panama	1.90			Tunisia	1.39		
Paraguay	1.81			Ukraine	1.36		
Peru	1.90						
Portugal	1.84						
Singapore	1.78						
Spain	1.82						
Sweden	1.86						
Switzerland	1.88						
Trinidad and Tobago	1.67						
United Kingdom	1.86						
United States	1.85						
Uruguay	1.77						
Venezuela	1.84						
Zambia	1.79						

(*) ***Financial Openness Index:*** the scoring draws on the methodology originally developed by Dennis Quinn and Carla Inclan, *The Origins of Financial Openness: A Study of Current and Capital Account Liberalization*, 1997, and is based on information contained in International Monetary Fund, *Annual Report on Exchange Arrangements and Exchange Restrictions*, 1998. For a full explanation of the scoring, see Appendix.

(**) ***Open:*** Little or no regulation for outward/inward transactions with a generally nondiscriminatory environment.
Largely Open: Some regulations are exercised on outward and inward transactions with the need of documentary support but without the need of governmental approval.
Partially Closed: Regulation and governmental approval is required for outward and inward transactions and it is usually granted.
Largely Closed: Substantial restrictions and governmental approval is required and seldom granted for outward and inward transactions.

Characteristics of International Finance in the 1990s

Particularly striking in the 1990s are the numerous liquidity and currency crises, such as those experienced by the European Monetary System in 1992-93, Mexico in 1994-95, East Asia (Malaysia, Korea, Thailand, Indonesia, and the Philippines) in 1997, and Russia and Brazil in 1998. All these emerging markets first had a surge in capital flows (from the early-to-mid 1990s) and then fell victim to sudden reversals–on the order of 10 percent of the GDP in East Asia. The episodes in 1997-98 offer examples of how one of the largest markets in the world—for capital—could fail, at several levels. Borrowing countries were not properly monitoring the high exposure of their domestic banks and corporations to foreign currency risk. Major international players, such as credit rating agencies, failed to properly assess the country risk in the globalizing financial environment of the 1990s. Regulators failed because of the weakness of their regulatory and supervisory frameworks.

Four salient features of international finance in this decade have helped to shape its character as well as lead to crisis:

- First, high risks of contagion across countries exist in international capital and loan markets. During the Asian crisis, the world witnessed financial meltdowns spreading from one country to another.

- Second, these crises and their corresponding shocks were largely unforeseen and unexpected by market participants. Credit spreads on emerging market debt declined, and international bank lending continued to expand until just before the beginning of the Asian crisis. This dramatic change in attitudes on the part of international investors and financiers has led some researchers to ascribe the cause of the Mexican and East Asian crises to self-fulfilling investor panics and speculative attacks (Radelet and Sachs 1998).

- Third, capital flows into many developing countries were channeled through short-term banking instruments, as banks were perceived to have implicit government guarantees. As a result, credit standards and prudent project appraisals were often compromised, leading to over-investment in sectors with surplus capacity or declining demand. Indeed, it appears that many market participants, if not most, succumbed to the inherent "moral hazard" in these perceived government guarantees. This accounts for the simultaneous incidence of foreign exchange liquidity crises in countries with fixed exchange rates and collapses of their domestic banking systems.

- Fourth, the primary sources of instability originated in the capital account, unlike the history of current account problems that Bretton Woods institutions were designed to prevent. This recognition has implications for the design of policy responses—and for the traditional approach to country risk assessment. In today's globalized financial environment, a better measure of a country's external payments position is the condition of its total balance sheet—that is, its assets and liabilities, with liabilities including both debt and equity.

Many developing countries moved in the 1990s to liberalize financial markets and relax restrictions on capital transactions, without putting into place adequate institutional frameworks on money, foreign exchange markets, and capital markets. As they liberalized, access to a broader menu of foreign financing was opened to banks and corporate borrowers, with strong incentives for recourse to foreign finance. The desirability of longer-maturity foreign capital for funding infrastructure projects provided a strong competitive advantage to foreign capital, particularly in countries with a pegged exchange rate regime to the U.S. dollar. As the private sector became the main recipient of foreign capital, the vulnerability to financial crisis has increased. But, neither the maturity nor the foreign exchange risk associated with foreign capital was taken into account or properly priced.

Fairly stable macroeconomic environments in both developed and developing countries, subdued international interest rates, low commodity prices, and the optimism of the post-Cold War era—viewed against this backdrop, recent financial events in East Asia, Latin America, and Russia underline the new nature and new sources of financial risks in the 1990s. They also show why a broader risk management framework is critical to meeting the challenges of globalization and thus to aiding development.[11] Such efforts have highlighted the role of four sets of factors–institutional and structural imperfections in international capital markets, weakness in domestic banking systems, unsound corporate governance structures, and failure to manage financial risk – as key determinants of a country's vulnerability to external financial shocks. These newly identified determinants provide the intellectual underpinnings for proposals to strengthen the international monetary and financial system.

IV. Managing Risks

Fundamental Objectives and Tradeoffs

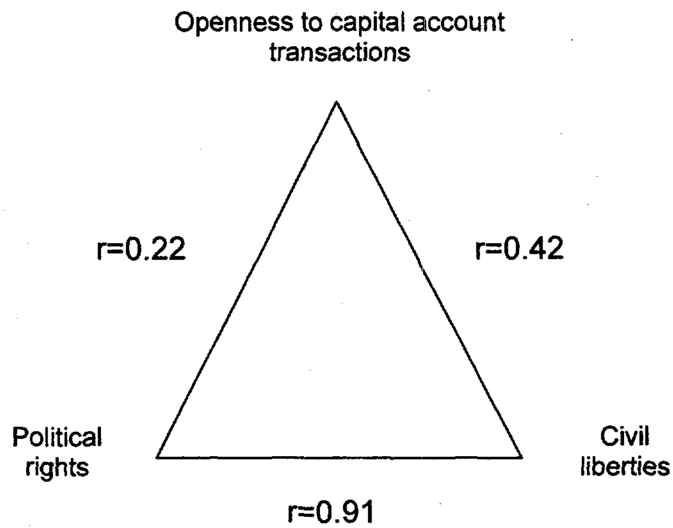
Among scholars and policymakers concerned with international finance, openness to international capital movements, democratic forms of governance, and national policy autonomy command respect. How attainable are these goals? And under what conditions? These two questions been much debated in the literature on international economics and politics. That these goals occupy such official and scholarly attention clearly reflects the remarkable global success in the advance of democracy, political and civil liberty, and financial integration.

Indeed a closer look at cross-sectional evidence uncovers a robust, positive association between indicators of financial openness and political and civil liberty across

[11] These recent events in have required the development and elaboration of new analytical models (that are distinct from the traditional Krugman model) to explain why some countries suffered from the financial shocks of the 1990s, while others emerged relatively unscathed.

a large sample of countries as shown by Figure 5.3. Political and civil liberty indices are from the *Comparative Survey of Freedom* that Freedom House has provided on an annual basis since 1973.[12] The *Survey* rates each country on a seven-point scale for both political rights and civil liberties (1 representing the most free and 7 the least free). So, it can be argued that countries more open to international capital flows are also open in offering a high degree of political and civil liberty to their citizens. Much current debate probes how best to achieve this "triangle," and balance the benefits with the risks inherent in its pursuit.

Figure 5.3:
Correlations of capital openness with political rights and civil liberties



Note: The estimated correlation coefficients are statistically significant (based on the z-test), and are robust to alternative quantitative measures of capital account openness.

Despite some risks, the benefits of open capital accounts outweigh their costs, for both individual countries and the global economy as a whole. That is generally agreed. Major benefits for developing countries include access to a broader menu of investment sources, options, and instruments. They also include enhanced efficiency of domestic financial institutions, and the discipline of capital markets in conducting domestic macroeconomic policy. And by easing financing constraints, the greater availability of

[12] The *Survey* assesses a country's freedom by examining its record in these two areas: A country grants its citizens **political rights** when it permits them to form political parties that represent a significant range of voter choice and whose leaders can openly compete for and be elected to positions of power in government. A country upholds its citizens' **civil liberties** when it respects and protects their religious, ethnic, economic, linguistic, and other rights, including gender and family rights, personal freedoms, and freedoms of the press, belief, and association. The *Survey* divides the world into three broad categories: "Free" (countries whose ratings average 1-3); "Partly Free" (countries whose ratings average 3-5.5); and "Not Free" (countries whose ratings average 5.5-7). For more detail see Karatnycky, Adrian. (1999).

international finance can extend the period for countries to implement needed adjustments.[13]

For the global economy, open capital accounts support the multilateral trading system, expanding the opportunities for portfolio diversification and efficient allocation of global savings and investment.[14] There is also an important property rights issue related to the free movement of capital across national boundaries. As Richard Cooper states, "individuals should be free to dispose of their income and wealth as they see fit, provided their doing so does not harm others."[15] This view, embodying the thinking behind a liberal order, constitutes the "ideal" for the reconstruction of the international financial system to aspire toward.[16]

Another perspective questions whether the benefits of closer financial integration outweigh its socio-economic costs. Volatility in capital flows creates uncertainty in economic growth. And this perception of vulnerability to the internationalization of capital flows sees developing countries on the periphery. In the design and functioning of the post-World War II international monetary and financial system, developing countries exerted little influence. The supply of foreign capital to them was mostly official aid, grants, and loans intended for governments or public entities through multilateral or bilateral agencies. Private capital was marginal, and it surged only in the 1970s with an expansion of commercial bank lending that ended with the debt crisis in the 1980s. That was followed by a resumption of capital flows to emerging markets that culminated in a currency crisis in Mexico in the winter of 1994-95 and a deeper financial crisis in East Asia.

Mechanisms and Arrangements

Global financial risk and the strategies for managing it have changed substantially over the past fifty years. Three distinct periods, each unique in the way the global financial system changed, and the way in which countries dealt with the changes, can be recognized. The first period, from 1945-1973, entailed the post-World War II era, Bretton Woods system of fixed exchange rates. The second period, which lasted throughout the 1970s and well into the 1980s, consisted of high, volatile inflation along with macroeconomic instability. The third distinct period is the post cold war of the 1990s.

[13] Markets will be willing to provide this leeway, however, only if they perceive that countries are truly undertaking adjustments that fundamentally address existing and prospective imbalances. Otherwise, markets will eventually exert their own discipline, in such a way that the time period for adjustment may be brutally shortened (see Dailami and Haque 1998).

[14] Fischer 1998

[15] Cooper, p. 12 (1998)

[16] Lawrence Summers, U.S. Deputy Secretary of the Treasury, has emphasized the importance of a liberal paradigm in building a new international financial architecture, as well, stating "We should all be able to agree on the danger of … denying a country's own citizens the capacity to convert their own currency and invest abroad. Such measures represent substantial intrusions on freedom." (speech delivered October 22, 1998, Washington, D.C., Cato Institute's 16th Annual Monetary Conference)

The Bretton Woods period combined fixed exchange rates with capital controls on the external side and Keynesian macroeconomics with the welfare state on the domestic side.[17] The solution devised at Bretton Woods gave priority to fixed exchange rates and national policy autonomy. As put forth by several scholars, capital controls were an accepted norm of the international monetary system in the 1950s and 1960s, as the Bretton Woods Agreement did not grant the IMF jurisdiction over capital movements.[18] It was not until September 1997 that the Interim Committee of the IMF "agreed that the Fund's Articles (of Agreement) should be amended to make the promotion of capital account liberalization a specific purpose of the Fund and to give the Fund appropriate jurisdiction over capital movements."[19] Thus the relative closure of national economies to the free flow of capital in that era–with a few exceptions–afforded governments the scope for deploying the instruments of fiscal and monetary policy, including progressive taxation and public expenditures, in pursuit of national objectives of full employment and social equity, without fear of the exit of capital. The relatively high degree of policy autonomy served well the cause of democracy, particularly in Western Europe, where it advanced to a high degree of maturity. It was not until the 1970s, after Western European countries had achieved currency convertibility on their current accounts of balance of payments, that free movement of capital across national boundaries emerged as an important policy priority.

The collapse of the Bretton Woods system in 1973, floating exchange rates, rising oil prices, chronic inflation, and slumping global economic conditions intensified currency and interest rate risks in global financial markets in the 1970s and 1980s. The responses were principally "market solution" types of action, exemplified by the drive towards international diversification of capital and the impressive expansion of derivative markets (interest and currency forwards, options, and swaps). Such steps occurred along with an important shift in the direction of macroeconomic policy away from its traditional focus on full employment and toward price stability.

The success of these actions has been considerable on both fronts. Derivative markets today provide a broad range of hedging instruments for managing currency and interest rate risks in major currencies. On the macroeconomic front, industrial countries and many developing countries have had considerable success in attaining stability, with smaller fiscal deficits and lower inflation and interest rates. Indeed, cross-country empirical research shows that volatility in main macroeconomic variables—economic growth, export growth, and inflation—was in the 1990s down more than 60 percent from the 1980s (Table A5.7 in the annex).

[17] This policy mix was referred to by John Ruggie (1983) as "a compromise of embedded liberalism" It connotes a commitment to a liberal order different from both the economic nationalism of the 1930s and the liberalism of the gold standard. For further elaboration, see G. Garrett (1998). R. Sally (1998) also referred to embedded liberalism as "mixed system thinking." Also see Dailami (1999).

[18] Reflecting the understanding of the time, Keynes expressed the issue succinctly in his often quoted 1944 speech to Parliament, stating that, "Not merely as a feature of the transition, but as a permanent arrangement, the plan accords to every member government the explicit right to control all capital movements. What used to be heresy is now endorsed as orthodox.... It follows that our right to control the domestic capital market is secured on firmer foundations than ever before, and is formally accepted as a part of agreed international agreements" (Gold 1977, p.11).

[19] See Polak (1998), p. 47.

In the 1990s, risk management demands more judicious strategies, both at the institutional level (i.e., corporate and financial institutions) and the national policy level. The global financial landscape has witnessed significant changes: The internationalization of the banking business; the breakdown of traditional boundaries between different sectors, such as banking, insurance, and underwriting; the emergence of emerging markets as important investment opportunities; and the broader investor base in emerging market economies which includes the commercial banks, pension funds, hedge funds, and mutual and insurance industries. All pose new challenges and require a more effective risk management approach.

At the same time, with innovation and the advances in technology and communications, financial risk management practice has improved significantly in recent years.[20] The evolution of Value at Risk (VAR) in the mid-1990s has led to a significant improvement in financial institutions' ability to measure market-related risk under normal volatility conditions, in a systematic manner. It has also stimulated a wealth of literature and computer-based modeling with applications particularly in the banking sector, for regulatory capital calculation (allowed under the recent amendment to the Basle Committee on Bank Supervision, BIS, January 1996); and as a benchmark for market risk.[21] Also, with the corporate focus on shareholder value increasing and the number and complexity of financial instruments expanding, the emerging perspective on risk management at a corporate level is shifting towards a company-wide integrated approach, encompassing credit, market, and operational risks in a holistic manner, integrating more closely market risk, credit risk and measurement processes. The rapid expansion in credit derivations market is changing fundamentally the banking business by providing opportunities to trade credit risk.

From the national perspective, a dilemma facing democratic societies is how to manage the tension between financial market integration and national policy autonomy, to pursue democratically defined economic and social goals. This tension between capital market integration and national policy autonomy can best be seen analytically in Hirschman's terminology of exit and voice.[22] In a world with high mobility of capital across national borders, the question facing open democratic societies is how to balance the threat of exit of capital, made more credible by opening capital markets, with the political demands for voice, and increased political incentives for government intervention in cushioning market dislocation. The potential exit of capital heightens the sense of economic insecurity and risk among a broader section of society. Since the benefits are disproportionately shared, at least initially, and the costs are also disproportionately borne by less-mobile factors of production – i.e. labor, agriculture – the political dimension is important.

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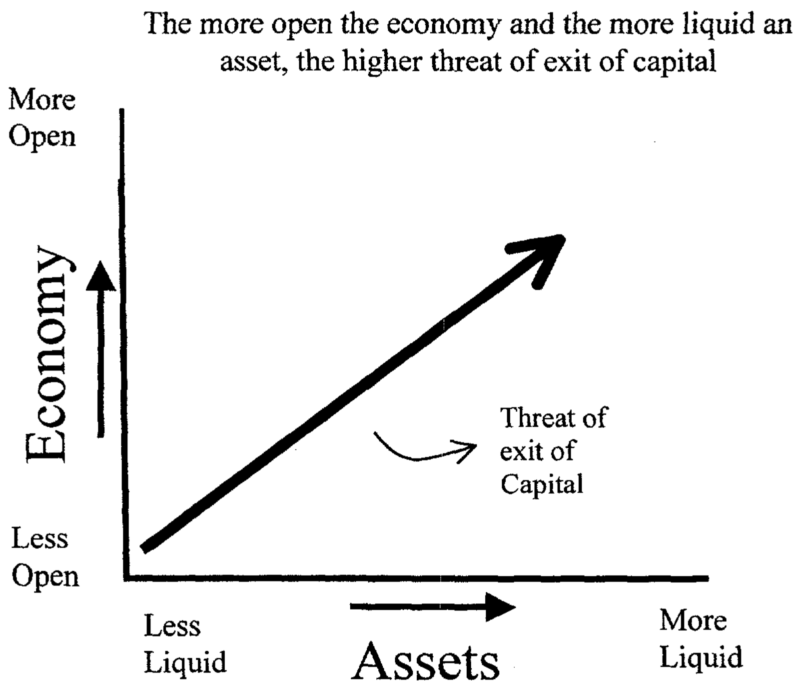
[20] Recent advances in risk management techniques addressing sovereign, credit, and operational risks will be explained in the forthcoming conference "Emerging Markets in the New Financial System: Managing Financial and Corporate Distress," organized jointly by the World Bank, IMF, and the Brookings Institution. For details, contact the author.

[21] VAR summarizes the worst expected loss over a specific time horizon, within a pre-defined confidence level, such as 99% or 95%. The literature on VAR is vast, see Jorion (1996); recent application of VAR has also raised important questions. For example, how can extreme market situations, --i.e., low probabilities, and high loss events that occur beyond the 99% or 95% confidence level—that might affect portfolio value, be incorporated in the modeling process through stress testing, EVT, scenario testing? How might a widespread use of VAR affect contagion?

[22] See Hirschman (1970).

Financial market integration increases the exit potential of capital as investors dissatisfied with the host countries' policies or prevailing investment climate would find it easier to shift their financial resources to other countries and regions. The threat of exit of capital, in this sense, refers not only to investors' decisions regarding existing foreign assets that can be liquidated or unwind, but also to the domestic liquid assets, such as money, and other liquid assets that can be converted and transferred. The exercise of exit of capital can be seen as a function of the degree of the "liquidity" of the underlying assets; the more liquid the assets, the less transaction cost involved but also the degree of financial openness of the country. For fixed assets, investments in plant and equipment with high sunk-in cost, the transaction cost in liquidating an investment is much higher. Figure 5.4 provides an illustration of this dynamic.

Figure 5.4:
Exit of capital as a function of the degree of the "liquidity" of the assets



The Role of Redistribution in Mitigating Risk

The counterbalance to the threat of exit of capital is the political voice by citizens, demanding protection against external risk through redistribution, social safety net programs, and other insurance-like measures.[23] Indeed critical in easing the tension between politics and financial openness in OECD countries, has been the role of their

[23] Thus in this interpretation voice belongs to the political sphere, the form that it takes, and how it is exercised is a function of the underlying political institution and particularly the degree of political and civil liberty.

redistributive policies in mitigating and redistributing risk, through massive transfer payments and other insurance-like government involvement. Government expenditures on health, education, social security, and welfare have averaged, in high income OECD countries in recent years (1991-1997) about 25 percent of their GDP, with smaller open European countries such as, Norway, Denmark, and Sweden, spending as much as 30% of their GDP.[24] Taking a large sample of countries, one can see strong cross-sectional evidence of a positive association between redistribution, financial openness, and civil and political liberty, as reported in Table 5.4. Furthermore, this view that financial openness, civil liberties, and government social spending go hand in hand, is confirmed by the help of econometric results shown in Figures 5.5 and 5.6.[25]

Table 5.4:
Taxonomy of Financial Openness*
Country Grouping by Financial Openness

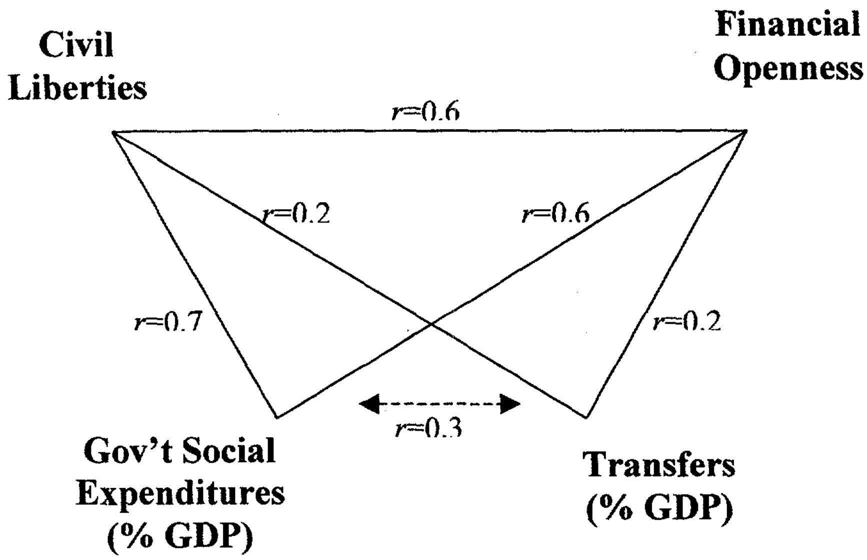
		I (Open)	II (Largely Open)	III (Largely Closed)	IV (Closed)
1	*Civil Liberties[1]*	2.37	3.7	3.6	5
2	*GDP/cap[2]*	13147	2814	2374	1557
3	*Social expenditure (%GDP)[3]*	22.3	20.7	12.9	6.7
4	*Total government exp/GDP (%)[4]*	26.0	19.9	23.4	27.7
5	*General government consumption (% of GDP)[5]*	16.1	17.9	15.5	14.7
	Number of countries	46	11	33	11

* The table displays the group averages computed for the countries where the data were available
Definition of variables:
(1) Civil liberties, see footnote 13.
(2) GDP/cap, Gross Domestic Product per capita, average of 1990-97.
(3) Social expenditure, includes the sum of health, education, and social security and welfare; average 1991-97.
(4)Total government expenditure, average of central government and budgetary accounts plus state or provincial government, 1990-97.
(5) General government consumption, includes all current expenditures for purchases of goods and services by all levels of government, excluding most government enterprises. It also includes capital expenditure on national defense and security, 1990-97.

[24] Focusing on globalisation through trade, Rodrik (1997) also emphasizes the relationship between redistribution and openness.
[25] More rigorous econometric investigation (using logit analysis) will also show that countries that score high on both political (civil) liberty and openness tend to spend a high proportion of their GDP on social needs, such as education, health and transfer payments. See Dailami (1999).

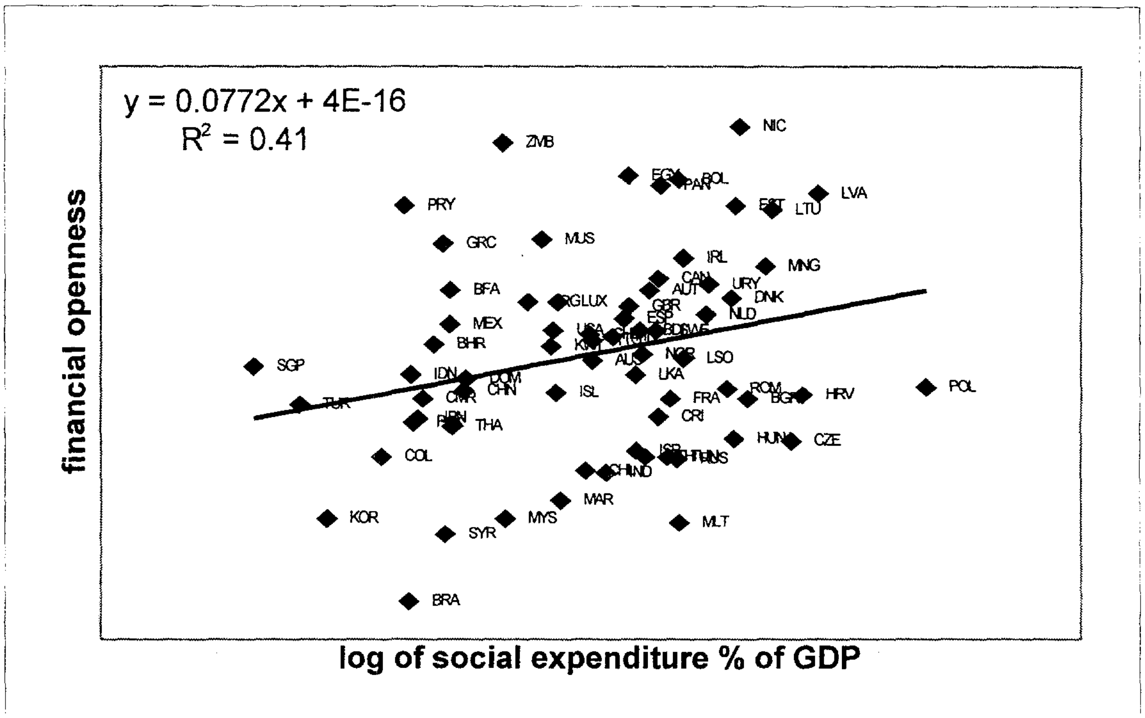
Transfers and social spending ease the tension between financial openness and politics

Figure 5.5:
Relationships among civil liberties, capital mobility, and government social expenditures



Note: The cross-country data, with sample size randing from 70 to 140, shows statistically significant results for all three relationships, with the highest correlation between civil liberty and government social expenditures (see Table A5.5 in the Appendix for a summary of the statistics and sources of the main variables used).

Figure 5.6:
Relationship between financial openness and social expenditure (controlling for per capita income)



One important underlying motivation for redistribution is the demand for insurance, induced by volatility and insecurity in underlying economic conditions and when citizens are risk-averse.[26] Uncertainty over citizens' future economic position and income level can be an important source of demand for insurance-like redistribution, distinct from altruism and other poverty reduction related motives.[27] And an important source of volatility in economic conditions could be volatility in capital flows, as demonstrated most radically by the recent Asian financial crises.[28] The cross-country evidence also establishes a robust positive relationship between capital volatility and volatility in rate of economic growth (see figure 5.7) Also, redistribution policy needs to be financed often through discretionary taxation, and then there exists the associated fiscal and macroeconomic cost, which needs to be taken into account. How this trade-off between the costs and benefits of redistribution is resolved remains an important question, to which the experience of OECD countries could shed some light.

[26]The idea of distribution as insurance has, of course, a long tradition in welfare economics going back to Lerner (1994); Harsanyi (1953),and Rawls (1971). More recently this issue has been analyzed from the perspective of constitutional political economy, see Mueller (1997); Wessels (1993).

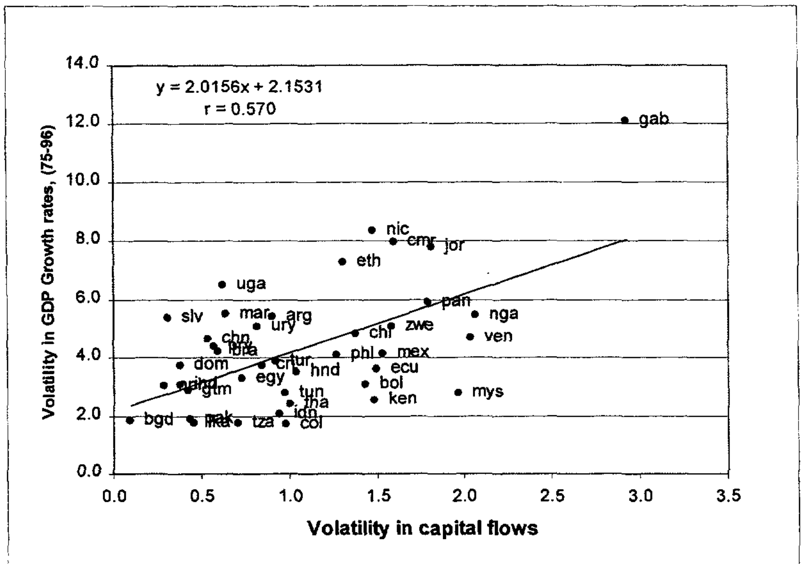
[27] See Wessels (1993) for a justification of this type of redistributive scheme, within the realm of methodological individualism.

[28] Indeed, the social costs associated with the recent crises in emerging market economies have been substantial. Over just one year, unemployment doubled in Thailand and tripled in Korea, while standards of living declined 14 percent and 22 percent, respectively; Indonesia also experienced a 25 percent decrease in standard of living (Stiglitz and Bhattacharya 1999). Not quantifiable are further costs such as lost schooling, malnutrition among some, and political strife.

More volatile private capital flows means more volatile growth

Figure 5.7:

Relationship between economic growth variability and volatility in private foreign capital flows



Today almost all modern advanced democracies are also open to international capital movements and, indeed by the early 1990s had achieved capital account convertibility on their currencies International policy coordination both in the domain of macroeconomic policy conduct as well as in financial regulation and supervision is part of the answer—but not all. It has been instrumental in reducing payment imbalances, in stabilizing expectations regarding currency and interest rate movements, and in lessening the volatility of capital flows across their borders.[29] In the same vein, the coordination of international banking regulation among industrial countries has been quite significant, exemplified by the landmark voluntary agreements such as the Basle Capital Accord of 1992, and the subsequent Core Principles for Effective Banking Supervision.

Capital Controls as Instrument of Risk Management

An alternative approach for resolving the tension between capital market integration and national policy autonomy is the use of capital controls. Interest in this approach has been rekindled by recent financial crises in Asia, and Latin America in both academic and policy circles. Thus, it is increasingly being argued that under some circumstances, i.e., weakness in local financial markets, euphoria and panic behavior of foreign investors, and structural balance of payments problems, there exists a case for deploying capital controls, particularly on short-term flows, to reduce volatility. In this respect, a range of market-based capital flow interventions are available ranging from contingent liquidity facilities (less severe) to tax and reserve requirement on selected

[29] See Webb (1995) and Bryant and Hodgkinson (1989) for a discussion of international policy coordination in macroeconomics, and Kapstein (1989), for international coordination of banking regulation.

inflows. Chile's capital controls experience (see box 5.2) has attracted considerable interest, partly because of its market-based nature, transparency, and the fact that, it is easier to phase out restrictions based on taxation than those on quantitative controls. Recent analysis indicates that the Chilean experience has been partially effective by changing the debt composition-- reducing short-term capital inflows while increasing long-term ones--, and by allowing for a larger wedge between domestic and foreign interest rates. Much of these effects are likely to be temporary as controls are bound to lose their effectiveness in today's highly mobile capital environment.

Box 5.2 Chile's capital control measure through taxation.[30]

Faced with rapid expansion of capital inflows during 1988-90, the Central Bank of Chile imposed in 1991, quantitative restrictions on selective inflows in the form of an unremunerated reserve requirement (URR). At the same time several administrative controls on outflows were lifted, including, ceilings on foreign asset holdings by financial institutions –banks, insurance companies, and pension funds—relative to their capital, and the requirements that exporters surrender their export proceeds to the Central Bank of Chile.

Chile's experiment has stimulated much interest. A review of recent literature reveals the following positive and negative aspects.

The URR seems to have increased the scope of monetary policy conduct. It has contributed to change the composition of inflow, towards longer term maturities. On the other hand, it led to a fall in short-term flows, which was only partly compensated by an increase in long-term capital inflows.

In addition, the introduction of the URR seems to have not affected the pattern of real exchange rate: to increase short-term interest rates, thereby adversely affecting the investment that it has directly contributed to. And finally, it has involved transaction costs in terms of the monitoring of commercial banks.

[30] For further analysis, see Sebastian Edwards (1998), *Capital Flows, Real Exchange Rates, and Capital Controls: Some Latin American Experiences.* Working paper from the National Bureau of Economic Research, Inc. and Leonardo Hernandez and Klaus Schmidt-Hebbel (1999), *Capital Controls in Chile: Effective? Efficient? Endurable?* A paper presented at the World Bank conference on Capital Flows, Financial Crisis and Policies, April 15-16, 1999.

VI. Conclusion

The challenge facing the emerging economies in forging closer integration of their capital markets can be seen in two areas. The first encompasses the pace at which these countries should dismantle administrative controls over short-term capital flows and move toward full capital-account convertibility. The second area includes the overall incentive system and regulations that could govern international financial flows to minimize future risks and panics. Countries, both internally and under the rules of an international financial framework, need to develop suitable mechanisms for balancing the benefits of globalization with the risks. These mechanisms must work in a way that reduces the risks of panic and crisis, while remaining committed to free markets, free capital flows, and the principle of individual choice. Though technological advances and the sheer size of financial markets make the risk of panic and crisis an ever-present one, there are various options governments can follow to reduce significantly that risk.

Pursuing sound macroeconomic policies is an obvious first step, an essential prerequisite. But recent experience also shows that macro stability alone is not sufficient to guarantee sustainable growth unless reinforced by actions to strengthen domestic regulation and supervision of banks and other intermediaries; rebuild information infrastructure of financial markets, including accounting norms; and improve corporate governance. With the increasing trend towards democracy world-wide, equally important is the availability of mechanisms through which insurance is provided to citizens, either through the marketplace or redistributive policy to avert political pressure for capital controls. In the long run, the globalization of capital requires an open institutional framework to ensure transparent accounts, secure property rights, enforceable contracts, as well as regulations to control risk, yet such institutions do not exist or are only in the early stages of development.

This paper has presented information suggesting that capital account openness, political and civil liberties, and redistributive public policy need to be correlated. Keep in mind the experience of OECD countries. Capital mobility as a policy objective gained currency and support only after significant trade liberalization, and only in democratic countries in which the states had established the ability to respond to citizens' demands for national economic security. By the time all OECD members had achieved full capital openness and convertibility, there was a sophisticated system of state responsibility for risk sharing in place. This must be taken into account when pondering the status and future of developing countries along the road to full capital account convertibility in today's international financial environment.

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Annex

Note 1

The difference between the potential GDP (based on the growth rate of the real economy over 1980-96) and the actual/estimated GDP in the three-year period 1997-99 is taken as the economic cost due to the financial crisis. The multi-year values were converted to 1996 values using a discount rate of 3 percent per year. Expressed as a percentage of the stock of debt in 1996, the estimated costs of the crises were: 97 percent for Indonesia, 291 percent for Korea, 81 percent for Malaysia, and 128 percent for Thailand. Similar computation for Brazil yields an estimate of 21 percent. (Note: For Korea, the debt stock figure used is for 1997.)

Table A5.5:
Macroeconomic indicators for affected countries

	Exchange rates		Equity prices		Short rates		GDP growth			Consumer prices		
	Dec.97- Aug.98	Jun.97 - Aug.98	Dec.97- Aug.98	Jun.97 - Aug.98	Aug.98 Real Rate (percent)	Jun.97 – Aug.98	1996	1997	1998	1996	1997	1998
Indonesia	–47	–76	–16	–53	–8.9	4130	8.0	5.0	-5.0	7.9	6.6	44.3
Korea	20	–34	–18	–59	2.8	61	7.1	5.5	-0.8	4.9	4.5	10.5
Malaysia	–8	–40	–49	–72	3.1	214	8.6	7.8	2.5	3.5	2.7	7.5
Philippines	–11	–40	–36	–57	6.4	554	5.7	5.1	2.5	8.4	5.1	8.0
Thailand	11	–42	–41	–58	3.2	–380	5.5	-0.4	-3.1	5.9	5.6	11.6
Argentina	0	0	–47	–55	8.4	155	4.2	8.4	5.5	0.2	0.8	0.3
Brazil	–5	–8	–34	–46	17.0	–122	2.8	3.0	1.5	15.5	6.0	3.3
Mexico	–19	–21	–40	–29	17.9	505	5.2	7.0	4.8	34.4	20.6	13.4
Russia	–50	–52	–79	–79	115.5	7906	-2.8	0.4	1.0	48.0	15.0	8.0
South Africa	–25	–30	–20	–33	16.3	484	3.2	1.7	2.2	7.4	8.6	6.0

(percentage changes over the period indicated, except for interest rates)

Source: World Bank and IMF.

Table A5.6:
Date that selected IMF member countries have assumed Article VIII

El Salvador	11/06/46	Iceland	09/19/83
Mexico	11/12/46	Spain	07/15/86
Panama	11/26/46	Indonesia	05/07/88
United States	12/10/46	Portugal	09/12/88
		Republic of Korea	11/01/88
Honduras	07/01/50		
Canada	03/25/52	Turkey	03/22/90
Dominican Republic	08/01/53	Thailand	05/04/90
		Switzerland	05/29/92
Belgium	02/15/61	Greece	07/22/92
France	02/15/61	Tunisia	01/06/93
Germany	02/15/61	Morocco	01/21/93
Ireland	02/15/61	Israel	09/21/93
Luxembourg	02/15/61	Mauritius	09/29/93
Netherlands	02/15/61	Barbados	11/03/93
Sweden	02/15/61	Trinidad and Tobago	12/13/93
Italy	02/15/61	Ghana	02/02/94
United Kingdom	02/15/61	Sri Lanka	03/15/94
Austria	08/01/62	Bangladesh	04/11/94
Jamaica	02/22/63	Lithuania	05/03/94
Kuwait	04/05/63	Latvia	06/10/94
Japan	04/01/64	Pakistan	07/01/94
Nicaragua	07/30/64	Estonia	08/15/94
Costa Rica	02/01/65	India	08/20/94
Australia	07/01/65	Paraguay	08/23/94
Guyana	12/27/66	Malta	11/30/94
Denmark	05/01/67	Croatia	05/29/95
Norway	05/11/67	Poland	06/01/95
Bolivia	06/05/67	Moldova	06/30/95
Argentina	05/14/68	Slovenia	09/01/95
Singapore	11/09/68	Philippines	09/08/95
Malaysia	11/11/68	Czech Republic	10/01/95
		Slovak Republic	10/01/95
Ecuador	08/31/70	Botswana	11/17/95
Bahrain	03/20/73	Malawi	12/07/95
South Africa	09/15/73	Hungary	01/01/96
The Bahamas	12/05/73	Mongolia	02/01/96
Papua New Guinea	12/04/75	Benin	06/01/96
Venezuela	07/01/76	Burkina Faso	06/01/96
Chile	07/27/77	Cameroon	06/01/96
		Mali	06/01/96
Uruguay	05/02/80	Russian Federation	06/01/96
New Zealand	08/05/82	Namibia	09/20/96
Belize	06/14/83	Romania	03/25/98

Source: Exchange Arrangements and Exchange Restrictions, Annual Report 1998

Table A5.7:

Volatility Indicators (standard deviation of growth rates) averaged across developing countries

Volatility Indicators	70's	80's	90's
Inflation (CPI % change)	16.3613	209.9162	125.2165
Export Growth Rate	0.2143	0.1637	0.1296
GDP growth	0.0443	0.0418	0.0261

Volatility Change

Volatility Indicators	80's	90's
Inflation (CPI % change)	193.5549	-84.6997
Export Growth Rate	-0.0507	-0.0341
GDP growth	-0.0024	-0.0157

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